REMARKS

In the non-Final Office Action of May 6, 2004, the Examiner objected to the specification due to informalities; objected to claims 3, 6, 8, and 14 due to informalities; rejected claims 1-3, 11, 14, 15, and 18-20 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,314,103 to Medhat et al. ("Medhat") in view of U.S. Patent No. 6,430,195 to Christie et al. ("Christie"); rejected claims 4, 6, 8-10, 12, 13, 16, and 17 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Medhat in view of Christie and further view of U.S. Patent No. 6,253,207 to Malek et al. ("Malek"); rejected claims 21 and 22 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Medhat in view of Christie and further in view of U.S. Patent No. 6,614,781 to Eliot et al. ("Eliot"); and objected to claims 5 and 7 as being dependent upon a rejected base claim.

By way of this amendment, claims 1-8, 10-14, 16, 17, and 20 have been amended to improve form. Claim 22 was canceled without prejudice or disclaimer. Claim 23 was added. As a result of this amendment, claims 1-21 and 23 are pending.

Applicant notes with appreciation that claims 5 and 7 have been indicated as containing allowable subject matter.

Objections to the Specification

On page 2 of the Office Action, the Examiner objected to the specification due to informalities. Applicant amended the specification as suggested by the Examiner. Therefore, Applicant respectfully requests that the objection to the specification be withdrawn.

Objection to Claims 3, 6, 8, and 14

On page 3 of the Office Action, the Examiner objected to claim 8 due to alleged use of an inappropriate article and to claims 3, 6, and 14 due to insufficient antecedent basis. Applicant amended claim 8 as suggested by the Examiner and claims 3, 6, and 14 to address improper antecedent basis. Therefore, Applicant respectfully requests that the objection of claims 3, 6, 8, and 14 be withdrawn.

Rejection of Claims 1-3, 11, 14, 15, and 18-20

On page 3 of the Office Action, the Examiner rejected claims 1-3, 11, 14, 15, and 18-20 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Medhat in view of Christie. Applicant respectfully traverses the rejection.

Amended independent claim 1 is directed to an intelligent network for use with an ATM network to set up an ATM switched virtual circuit to provide VToA services and point-to-multipoint connectivity. The intelligent network includes a multi-service control point, an ATM signaling intercept processor, and a service administration. The multi-service control point is operable to receive an input extracted from an input ATM setup message that includes a called party phone number value, a VToA designator, and a request to establish a point-to-multipoint connection, enforce policies regarding establishment of point-to-multipoint connections, and generate an output in response for use in generating an output ATM setup message. The ATM signaling intercept processor is operable to intercept the input ATM setup message from an ingress ATM edge switch

of the ATM network, extract the input from the input ATM setup message, communicate the input to the multi-service control point, receive the output generated by the multi-service control point, generate the output ATM setup message using the output, and communicate the output ATM setup message to the ingress ATM edge switch of the ATM network. The service administration is operable to provision the multi-service control point and the ATM signaling intercept processor.

Medhat and Christie do not disclose or suggest, either separately or in combination, the multi-service control point being operable to receive an input extracted from an input ATM setup message that includes a called party phone number value, a VToA designator, and a request a request to establish a point-to-multipoint connection, enforce policies regarding establishment of point-to-multipoint connections, and generate an output in response for use in generating an output ATM setup message, as recited in claim 1.

On page 4 of the Office Action, the Examiner argued that Medhat discloses the multi-service control point. In particular, without showing where either Medhat or Christie discloses or suggests a VToA designator, the Examiner argued that a VToA designator is included in call signaling to setup a call. Applicant disagrees.

Medhat fails to disclose a VToA designator. Applicant submits that a broadband network, such as the network disclosed in Medhat, may setup calls other than voice calls. For example, Medhat, at column 1, lines 56-62 discloses:

> Broadband systems provide telecommunications providers with many
> benefits, including greater bandwidth, more efficient use of bandwidth,
> and the ability to integrate voice, data, and video communications. These

broadband systems provide callers with increased capabilities at lower costs.

Thus, broadband systems may carry voice, data, and video communications.

Christie discloses that broadband telecommunication systems provide

telecommunication system providers the ability to integrate voice, data, and video traffic

(see Christie, at column 1, line 65 through column 2, line 1).

Christie, at Fig. 2 and column 3, line 42-52 discloses:

> FIG. 2 depicts a version of the invention. CPE 210 and 212 are shown connected to broadband system interface 200 over connections 220 and 222 respectively. CPE 210 and 212 provide services to many communications devices at the customer premises. Examples of these devices would include computers, modems, and facsimile machines. Connections 220 and 222 are ISDN connections or are connections based on any format that can be converted to ISDN. A common example would be TDM connections using the ESF format. Note that broadband system interface 200 replaces the local switch of FIG. 1.

Thus, Christie discloses that calls may carry faxed data or computer modem signals.

Although Medhat and Christie disclose that calls may be voice, video, or data,

both disclosures fail to disclose anything that would indicate that a call is associated with

providing VToA services, much less that the call includes a VToA designator.

Applicant submits that a point-to-multipoint connection is a connection from one

point to multiple points. For example, Applicant's specification, at page 8, lines 14-16

(as numbered) discloses, "[a] point-to-multipoint connection may be defined as a

unidirectional connection from a root node to multiple leaf nodes."

On page 4 of the Office Action, the Examiner argued that Medhat discloses a

request to establish a point-to-multipoint connection and enforcing policies regarding

establishment of point-to-multipoint connections. The Examiner relied on Medhat, at

column 8, lines 30-41 to support his argument.

Medhat, at column 8, lines 30-41 discloses:

Call admission control (CAC) determines at call setup whether to grant or to refuse a connection. If sufficient resources are available to connect a call, and if the call assignment for a connection does not affect QoS of the existing call connections, then the connection is granted. When multiple connections are required to setup a call, CAC separately checks each VP/VC and VPG for the call. CAC may receive operations, administration, and maintenance (OAM) information and process the OAM information to determine connection availability and to determine service and resource allocation and control.

Thus, Medhat discloses that multiple connections may be required to setup a call. The

Examiner appears to equate multiple connections for a call with a point-to-multipoint

call. However, nothing in Medhat discloses or suggests that the call is from one point to

multiple-points.

For example, one of ordinary skill in the art would understand that a call for a

video teleconference may include multiple connections, such as, a voice connection, a

video connection, and a data connection. The multiple connections would be from one

point to another point. Such a call is not a point-to-multipoint call as would be

understood by one skilled in the art.

On pages 4 and 5 of the Office Action, the Examiner argued that Medhat

disclosed an ATM signaling intercept processor operable to intercept the input ATM

setup message from an ingress ATM edge switch of the ATM network, extract the input

from the input ATM setup message, communicate the input to the multi-service control

point, receive the output generated by the multi-service control point, generate the output

ATM setup message using the output, and communicate the output ATM setup message to the ingress ATM edge switch of the ATM network, as recited in claim 1. Applicant disagrees.

For example, Medhat does not disclose or suggest an input or output ATM setup message. Medhat, at column 9, lines 40-56 discloses:

> Links are used to transport call signaling and control messages. The term "link" as used herein means a transmission media used to carry call signaling and control messages. For example, a link would carry call signaling or a device control message containing device instructions and data. A link can carry, for example, out-of-band signaling such as that used in SS7, C7, ISDN, DPNSS, B-ISDN, GR-303, or could be via local area network (LAN), or data bus call signaling. A link can be, for example, an AAL5 data link, UDP/IP, ethernet, DS0, or DS1. In addition, a link, as shown in the figures, can represent a single physical link or multiple links, such as one link or a combination of links of ISDN, SS7, TCP/IP, or some other data link. The term "control message" as used herein means a control or signaling message, a control or signaling instruction, or a control or signaling signal, whether proprietary or standardized, that conveys information from one point to another.

Thus, Medhat discloses a number of signaling protocols that may be used to request a call. However, Medhat does not disclose or suggest using an ATM protocol message, such as an input ATM setup message, to request a call.

On page 5 of the Office Action, the Examiner admitted that Medhat failed to explicitly teach an ATM signaling intercept processor that is operable to intercept an input ATM setup message from an ingress ATM edge switch of the ATM network, and extract an input from the input ATM setup message, but relied on Christie as allegedly disclosing this feature. However, Christie also fails to disclose or suggest this feature.

Christie discloses using ISDN and SS7 signaling to request and establish a call (See abstract and Figs. 4-7). Christie fails to disclose or suggest requesting a call via an input ATM setup message.

Applicant submits that, at least because Medhat and Christie fail to disclose or suggest using an input ATM setup message, that neither Medhat nor Christie, whether taken alone or in any combination, discloses or suggests an ATM signaling intercept processor operable to intercept the input ATM setup message from an ingress ATM edge switch of the ATM network, extract the input from the input ATM setup message, communicate the input to the multi-service control point, receive the output generated by the multi-service control point, generate the output ATM setup message using the output, and communicate the output ATM setup message to the ingress ATM edge switch of the ATM network, as recited in claim 1.

For at least the reasons discussed above, Applicant submits that claim 1 is patentable over Medhat and Christie and respectfully request that the rejection of claim 1 be withdrawn.

Amended claims 2-3 and 11 depend from claim 1 and are patentable over Medhat and Christie at least for the reasons discussed above with respect to claim 1. Therefore, Applicant respectfully requests that the rejection of claims 2-3 and 11 be withdrawn. Applicant further submits that these claims recite certain other features that are not disclosed or suggested by Medhat and Christie.

For example, claim 2 further recites that the multi-service control point is operable to receive a request from a calling party to establish a point-to-multipoint

connection and determine if the calling party is authorized to make point-to-multipoint connections.

On page 6 of the Office Action, the Examiner referred to Medhat, Fig. 3 and argued, "communication devices 202, 210 and 218, in which, the communication device 202 can communicate with both communication device 210 and communication device 218 (hence point-to-multipoint communications)."

As discussed previously, one of ordinary skill in the art would understand that a point-to-multipoint connection would be a single connection from one point to multiple points. Applicant wishes to point out that Medhat fails to disclose a single connection from a point to multiple points. Medhat may disclose a call or connection from communication device 202 to communication 210 and another call from communication device 202 to communication device 218. However, these would be two separate calls or connections and therefore, not a point-to-multipoint call or connection.

For at least the additional reasons discussed above, Medhat does not disclose or suggest the above-mentioned feature of claim 2. Christie also does not disclose or suggest point-to-multipoint connections. Applicant submits that neither reference, whether taken alone or in any combination, discloses or suggests the above feature of claim 2.

Applicant submits that Medhat and Christie fail to disclose or suggest the multi-service control point being operable to allow the point-to-multipoint connection to be established if a calling party is authorized to make point-to-multipoint connections and a bandwidth requested is within authorized limits, as recited in claim 3.

On page 7 of the Office Action, the Examiner argued that <u>Medhat</u> discloses the above-mentioned feature of claim 3. The Examiner relied on <u>Medhat</u>, at column 10, lines 13-24 to support this argument.

<u>Medhat</u>, at column 10, lines 13-24 discloses:

> The VCs differentiate individual calls on a VP in a VPG between the interworking unit 112 and the cross connect 108 or the ATM devices 128 and 134, and they identify, for example, the destination of the call. For example, VP/VC "A" for a VPG may be provisioned from the interworking unit 112, through the cross connect 108, and "destined" for another interworking unit connected to the first ATM device 128 over the connections 120 and 124. VP/VC "B" for the VPG may be provisioned from the interworking unit 112, through the cross connect 108, and "destined" for another interworking unit connected to the second ATM device 134 over the connections 122 and 130. An example of an ATM cross connect is the NEC Model 20.

Thus, <u>Medhat</u> discloses that <u>the VCs differentiate individual calls on a VP</u>. One call, VP/VC "A" for a virtual path group (VPG) may be provisioned from the interworking unit 112, through the cross connect 108, and "destined" for another interworking unit connected to the first ATM device 128 over the connections 120 and 124. Another call, VP/VC "B" for the VPG may be provisioned from the interworking unit 112, through the cross connect 108, and "destined" for another interworking unit connected to the second ATM device 134 over the connections 122 and 130. Thus, the above cited portion describes <u>two separate connections or calls</u>, one from the interworking unit 112 to ATM device 128 and another from the interworking unit 112 to ATM device 134. One of ordinary skill in the art would not recognize the <u>two separate connections</u> as a point-to-multipoint connection.

For at least the additional reasons discussed above, the combination of <u>Medhat</u> and <u>Christie</u> does not disclose or suggest a multi-service control point operable to allow a point-to-multipoint connection to be established if the a calling party is authorized to make point-to-multipoint connections and a bandwidth requested is within authorized bandwidth limits, as recited in claim 3.

Amended independent claim 14 is directed to a method for providing a point-to-multipoint service to control point-to-multipoint connections using an intelligent network and a switched virtual circuit over an ATM network. The method includes receiving a request from a calling party to establish a point-to-multipoint connection, determining if the calling party is authorized to make point-to-multipoint connections, rejecting the request if the calling party is not authorized to establish point-to-multipoint connections, analyzing the request to determine if a bandwidth requested for the point-to-multipoint connection is within authorized bandwidth limits, and rejecting the request if the bandwidth requested is not within authorized bandwidth limits.

Applicant submits that the features of amended independent claim 14 are similar to features of claim 1. Therefore, Applicant submits that claim 14 is patentable over <u>Medhat</u> and <u>Christie</u> at least for reasons similar to the reasons discussed above with respect to claim 1. Applicant, therefore, respectfully requests that the rejection of claim 14 be withdrawn.

Claims 15 and 18-20 depend from claim 14 and are patentable at least for the reasons discussed above with respect to claim 14. Therefore, Applicant respectfully requests that the rejection of claims 15 and 18-20 be withdrawn. Applicant further

submits that these claims recite certain other features that are not disclosed or suggested by Medhat and Christie.

For example, Applicant submits that neither Medhat nor Christie, whether taken alone or in any combination, disclose or suggest the request (from a calling party to establish a point-to-multipoint call) includes information from an input ATM setup message, as recited in claim 20.

On page 9 of the Office Action, the Examiner admitted that Medhat does not disclose or suggest a request that is received from information generated from an input ATM setup message. The Examiner relied on Christie, at Figs. 4-7 and column 6, lines 24-35 to disclose this feature.

Christie, at column 6, lines 24-35 discloses:

> The signaling processor processes the IAM and selects a connection. For a cross-country call, this connection would typically be a VPI/VCI provisioned to a long distance network. The signaling processor will generate an SS7 IAM and send it on to the relevant network element to extend the call. The SS7 converter sends an ISDN call proceeding message back to the ISDN converter. The signaling processor will generate a control instruction identifying the DS0 and the selected VPI/VCI and send it to the mux. Once the far end has received all information required for the call, it will return an SS7 Address Complete Message (ACM) to the signaling processor. The signaling processor will send an SS7 ANM to the SS7 converter, which will send an analogous ISDN alerting message to the ISDN converter.

Thus, Christie discloses that calls are requested using ISDN and SS7 protocol messages. Christie fails to disclose or suggest using an input ATM setup message.

The Examiner argued that the SS7 IAM message is equivalent to the ATM setup message. Applicant submits that SS7 and ATM are two different well known protocols.

One of ordinary skill in the art would understand that a SS7 IAM message is a signaling system 7 (SS7) protocol signal for requesting a call and that an ATM setup message is an asynchronous transfer mode (ATM) protocol message for requesting an ATM call. The two messages are in two different protocols and are not equivalent.

For at least the additional reasons discussed above, neither reference discloses or suggests using an input ATM setup message. Therefore, the request of <u>Medhat</u> and <u>Christie</u> cannot include information from an input ATM setup message, as recited in claim 20.

Rejection of Claims 4, 6, 8-10, 12, 13, 16, and 17

On page 9 of the Office Action, the Examiner rejected claims 4, 6, 8-10, 12, 13, 16, and 17 under 35 U.S.C. § 103(a) as allegedly being unpatentable over <u>Medhat</u> in view of <u>Christie</u> and further view of <u>Malek</u>. Applicant respectfully traverses the rejection.

Claims 4, 6, 8-10, 12 and 13 depend from claim 1. Applicant submits that neither <u>Medhat</u> nor <u>Christie</u>, whether taken separately or in any combination, disclose or suggest certain features of claim 1 for the reasons discussed above with respect to claim 1. <u>Malek</u> also fails to satisfy the deficiencies of <u>Medhat</u> and <u>Christie</u>.

For example, <u>Malek</u> fails to disclose or suggest an input ATM setup message. Therefore, <u>Medhat</u>, <u>Christie</u>, and <u>Malek</u>, whether taken alone or in any combination, cannot disclose or suggest a multi-service control point operable to <u>receive an input extracted from an input ATM setup message</u> that includes a called party phone number value, a VToA designator, and a request to establish a point-to-multipoint connection,

enforce policies regarding establishment of point-to-multipoint connections, and generate an output in response for use in generating an output ATM setup message, as recited in claim 1.

For at least the reasons discussed above, Applicant submits that claims 4, 6, 8-10, 12 and 13 are patentable over Medhat, Christie, and Malek and respectfully request that the rejection of claims 4, 6, 8-10, 12 and 13 be withdrawn. Applicant further submits that these claims recite additional features not disclosed or suggested by Medhat, Christie, and Malek.

For example, Applicant submits that Medhat, Christie, and Malek, whether taken together or in any combination do not disclose or suggest analyzing a leaf request to determine if a maximum number of leaf nodes has been exceeded, as recited in claim 4.

On page 10 of the Office Action, the Examiner admits that both Medhat and Christie fail to explicitly disclose receiving a leaf request from a calling party to add a leaf node to an existing point-to-multipoint connection. On the same page, the Examiner then argued that Malek discloses analyzing a leaf request to determine if a maximum number of leaf nodes has been exceeded. The Examiner relied on Malek, at column 5, line 61 through column 6, line 6 to support the argument.

Malek, at Fig. 4 and column 5, line 61 through column 6, line 6 discloses:

In addition, the multimedia call handler process 800, discussed below in conjunction with FIG. 8, will receive a connection request associated with a given multimedia session during the call connection phase, analyze the types of media included in the session and network conditions, and will thereafter determine the desired capacity values, C_n, to be assigned to each monomedia component. The multimedia traffic handler 400 will then request connections for each monomedia component from source to

destination with the desired capacity values, C_n, in the same manner that a connection is requested in a conventional network for an integrated multimedia stream.

Thus, Malek discloses that a multimedia call handler process 800 determines a desired capacity, C_n, to be assigned to each monomedia component. Each monomedia component is a separate call, for example a voice call, a video call, or a data call (See Malek, at Figs. 4 and 5). Thus, multimedia traffic handler 400 requests connections for each monomedia component with the desired capacity values, C_n. Malek fails to disclose or suggest determining whether a maximum number of leaf nodes has been exceeded. Malek only discloses being concerned with the capacity of each monomedia component.

For at least the additional reasons discussed above, Applicant submits that Medhat, Christie, and Malek, whether taken together or in any combination, fail to disclose or suggest analyzing a leaf request to determine if a maximum number of leaf nodes has been exceeded, as recited in amended claim 4.

Amended claim 16 recites features that are similar to those of claim 4. Applicant submits that claim 16 is patentable over Medhat, Christie, and Malek for at least reasons similar to the reasons provided with respect to claim 4. Therefore, Applicant respectfully requests that the rejection of claim 16 be withdrawn.

Claim 17 depends from claim 16 and is patentable over Medhat, Christie, and Malek for at least the reasons provided with respect to claim 16. Therefore, Applicant respectfully requests that the rejection of claim 17 be withdrawn.

Rejection of Claims 21 and 22

On page 16 of the Office Action, the Examiner rejected claims 21 and 22 under 35 U.S.C. § 103(a) as allegedly being unpatentable over <u>Medhat</u> in view of <u>Christie</u> and further in view of <u>Eliot</u>. Applicant respectfully traverses the rejection.

Claim 21 depends from amended claim 14. Applicant submits that <u>Eliot</u> does not satisfy the deficiencies of <u>Medhat</u> and <u>Christie</u>, discussed above with respect to claim 14.

For at least the reasons discussed above, Applicant respectfully requests that the rejection of claim 21 be withdrawn.

Claim 22 was canceled without prejudice or disclaimer rendering the rejection of claim 22 moot.

Objection to Claims 5 and 7

On page 17 of the Office Action, the Examiner objected to claims 5 and 7 as being dependent upon a rejected base claim. For at least the reasons discussed above, Applicant submits that claims 5 and 7 depend from an allowable base claim and respectfully request that the objection to claims 5 and 7 be withdrawn.

New Claim 23

New claim 23 recites features similar to features of claim 1. Applicant submits that new claim 23 is patentable over the cited references for reasons similar to the reasons provided with respect to claim 1.
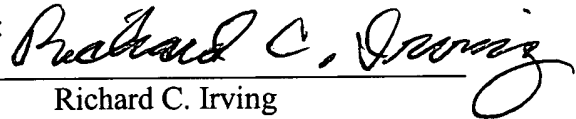
Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully

requests the Examiner's reconsideration of this application, and the timely allowance of

the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. §

1.136 is hereby made. Please charge any shortage in fees due in connection with the

filing of this paper, including extension of time fees, to Deposit Account No. 13-2491

and please credit any excess fees to such deposit account.

Respectfully submitted,
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